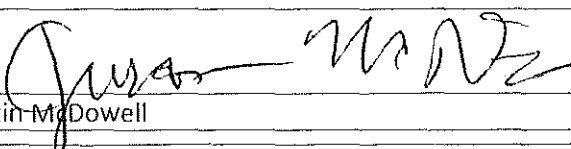
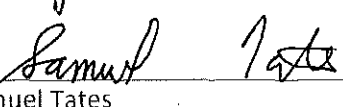


**Region 6 Compliance Assurance and Enforcement Division
INSPECTION REPORT**

Inspection Date(s):	October 16-18, 2018		
Media:	Air		
Regulatory Program(s)	Clean Air Act Section 112(r) and 40 C.F.R. Part 68 Chemical Accident Prevention Provisions (Risk Management Program)		
Company Name:	Orascom Construction Industries (OCI)		
Facility Name:	OCI Beaumont LLC		
Facility Physical Location:	5470 N. Twin City Highway		
(city, state, zip code)	Nederland, Texas 77627		
Mailing address:	P.O. Box 1647		
(city, state, zip code)	Nederland, Texas 77627		
County/Parish:	Jefferson		
Facility Contact:	Brian Lucas	HSEQ Manager	
	Brian.Lucas@OCIBeaumont.com		
FRS Number:	110000743900		
Identification/Permit Number:	Title V Permit / Air Operating Permit ID: O-01645		
Media Number:	RMP Number: 100000043142		
NAICS:	325199 (All Other Basic Organic Chemical Manufacturing)		
Personnel participating in inspection:			
Justin McDowell	US EPA R6	Inspector	(214) 665-6557
Brian Lucas	OCI Beaumont LLC	HSEQ Manager	(409) 723-1900
Cliff Wenzel	OCI Beaumont LLC	Sr. Environmental Engineer	(409) 723-1900
Joseph Hagmann	OCI Beaumont LLC	Plant Manager	(409) 723-1900
Mark Gentry	OCI Beaumont LLC	Operations Manager	(409) 723-1900
Thomas Harden	OCI Beaumont LLC	Maintenance Manager	(409) 723-1900
Danny Mearse	OCI Beaumont LLC	Sr. Safety Specialist	(409) 723-1900
Brandan Rossi	OCI Beaumont LLC	Engineering Manager	(409) 723-1900
Ray Renfrow	OCI Beaumont LLC	Procedures/ Training	(409) 723-1900
Bryan Markland	Lucite	Emergency Response	(409) 723-1900
Collene Mulholland	OCI Beaumont LLC	Mechanical Planner	(409) 723-1900
Jess Williams	OCI Beaumont LLC	Mechanical Inspector	(409) 723-1900
Bobby Owens	OCI Beaumont LLC	Staff	(409) 723-1900
Beckey Blanchet	OCI Beaumont LLC	Staff	(409) 723-1900
Leo Acosta	OCI Beaumont LLC	Staff	(409) 723-1900
Rachel Milroy	OCI Beaumont LLC	HR Manager	(409) 723-1900
EPA Lead Inspector Signature/Date			12/7/18
	Justin McDowell		Date
Supervisor Signature/Date			12/12/2018
	Samuel Tate		Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

I, United States Environmental Protection Agency (EPA) Region 6 inspector, Justin McDowell, arrived at the OCI Beaumont LLC facility (OCI) at 9:00 AM on Tuesday October 16, 2018, for an announced inspection. I met with Brian Lucas (HSEQ Manager), Cliff Wenzel (Sr. Environmental Engineer), Joseph Hagmann (Plant Manager), Thomas Harden (Maintenance Manager), Mark Gentry (Operations Manager) Danny Mearse (Sr. Safety Specialist) and Brandon Rossi (Engineering Manager) for an opening meeting. I presented my credentials and informed OCI personnel that this was an EPA inspection to determine compliance with the facility's Chemical Accident Prevention Program. The scope of the inspection was a partial compliance evaluation (PCE), which included an evaluation of the facility's compliance with the Clean Air Act (CAA) Section 112(r) and the Chemical Accident Prevention Provisions in 40 C.F.R. Part 68. OCI's Risk Management Plan (RMP) is listed as a Program Level three (3) process facility. I inquired if an employee representative was available pursuant to section 112(r)(6)(L) of the CAA to participate in this inspection and was informed that OCI is a non-union facility.

Table 1: Opening Meeting Attendance, Tuesday October 16, 2018

NAME	POSITION
Justin McDowell	USEPA R6 Inspector
Brian Lucas	HSEQ Manager
Cliff Wenzel	Sr. Environmental Engineer
Joseph Hagmann	Plant Manager
Thomas Harden	Maintenance Manager
Mark Gentry	Operations Manager
Danny Mearse	Sr. Safety Specialist
Brandon Rossi	Engineering Manager

FACILITY DESCRIPTION

OCI Beaumont LLC is located at 5470 N. Twin City Highway in Nederland, Texas along the Texas Gulf Coast. The facility is operated as a manufacturer of methanol and anhydrous ammonia. The OCI Beaumont facility was acquired in 2011, then underwent debottlenecking of both product lines to increase production capacity. The facility has approximately 126 full time employees on site.

Section II – OBSERVATIONS

On Wednesday, October 17, 2018, I conducted a walking tour of the facility accompanied by OCI Beaumont personnel. We began the tour by reviewing selected piping and instrumentation diagrams (P&IDs) followed by an overview of the process areas directed by the process flow of the ammonia and methanol product lines. When I initially arrived at the facility on Tuesday, October 16, 2018, I checked in

with the site's Lucite Security and was provided with a safety orientation video that included a site overview and emergency procedures. I was given a visitor's badge to enter the site.

Subpart A – General

40 C.F.R. § 68.10 Applicability – OCI is the owner or operator of a stationary source that has more than a threshold quantity of regulated toxic substances, listed in 40 C.F.R. § 68.130, in a process and is subject to the Chemical Accident Prevention Provisions. OCI has a CAA Title V permit along with an Air Operating Permit: O-01645 for their Basic Organic Chemical Manufacturing (NAICS: 325199) process. OCI is subject to the Occupational Safety and Health Administration process safety management (PSM) standard, 29 C.F.R. § 1910.119, and has one Program Level three (3) process.

40 C.F.R. § 68.12 General requirements – OCI re-submitted an RMP voluntary update on October 14, 2014. This re-submission listed a covered process containing two regulated toxic chemicals [ammonia (anhydrous) and chlorine]. This requires OCI to develop and implement a management system, conduct a hazard assessment, implement the prevention requirements of 40 C.F.R § 68.65 - § 68.67, develop and implement an emergency response program, and submit the data elements from 40 C.F.R §68.175 in their RMP.

40 C.F.R. § 68.15 Management – OCI has developed a management system to oversee the implementation of risk management program elements and has documented other persons responsible for implementing the individual requirements of the risk management program and defined the lines of authority in each procedure pertaining to each individual requirement. OCI has assigned the Health Safety and Environmental (HSE) Manager as the qualified person/position that has the overall responsibility for the development, implementation and integration of the RMP elements.

Subpart B – Hazard Assessment

40 C.F.R. § 68.20 Applicability – OCI is a program level three (3) stationary source subject to this subpart. OCI is required to prepare an offsite consequence analysis and complete the five-year accident history.

40 C.F.R. § 68.22 Offsite Consequence Analysis Parameters – I reviewed and discussed OCI's offsite consequence analysis and supporting documentation. The facility contracts a 3rd party company that uses RMP*Comp™ to document endpoints for offsite consequence analyses for both worst-case and alternative release scenarios from the rule. RMP*Comp™ ensures the appropriate wind speeds and stability classes for the release analyses, ambient temperatures and humidity values for release analyses, values for height of the release for the release analyses, and surface roughness values for the release scenarios are within parameters specified by EPA. During the onsite inspection, OCI did not provide a recent analyses of offsite consequence data. The analyses provided was from the previous 2010 analyses. On November 1, 2018, Brian Lucas provided me with updated analyses hard copy documentation.

40 C.F.R. § 68.25 Worse-case Release Scenario Analysis – OCI's RMP*Comp™ data that analyzed and reported in the RMP one worst-case scenario estimated to create the greatest distance to an endpoint from an accidental release of a regulated toxic substance from covered process under worst-case conditions was not up to date in its most recent RMP re-submission. On November 1, 2018, Brian Lucas

provided me with updated hard copy documentation. OCI Beaumont does not have any regulated flammable substances above threshold quantity in which an analysis would be required.

40 C.F.R. § 68.28 Alternative Release Scenario Analysis – OCI's RMP*Comp™ data that identified and analyzed at least one alternative release scenario for each regulated toxic substance held in a covered process(es) was from the previous 2010 analyses. **[AOC 1]** On November 1, 2018, Brian Lucas provided me with updated hard copy documentation.

40 C.F.R. § 68.30 Defining Offsite Impacts - Population – OCI's estimation of population that would be included in the distance to endpoint in the RMP based on a circle with the point of release at the center did not exist for the alternative release scenario analysis. **[AOC 2]**

40 C.F.R. § 68.33 Defining Offsite Impacts - Environment – OCI's environmental receptors that would be included in the distance to endpoint based on a circle with the point of release at the center did not exist for the alternative release scenario analysis. **[AOC 3]** OCI created this documentation and provided it to EPA on October 18, 2018.

40 C.F.R. § 68.36 Review and Update – OCI's most recent offsite consequence analyses were completed in 2014 and submitted in 2015. OCI stated that this documentation is reviewed and updated at least once every five years, but the most recent alternative release scenario analysis was 2010. **[AOC 4]**

40 C.F.R. § 68.39 Documentation – For the worst-case and alternative case scenarios, a description of the vessel or pipeline, the substance selected as worst-case, and the rationale for selection was included; likewise, assumptions included use of any administrative controls and any passive mitigation that were assumed to limit the quantity that could be released, estimated quantity released, release rate, and duration of release. The RMP*Comp™ methodology used to determine distance to endpoint was documented by the facility.

40 C.F.R. § 68.42 Five-year Accident History – OCI did not report any accidental releases from covered processes that resulted in deaths, injuries, or significant property damage on site, or known offsite deaths, injuries evacuations, sheltering in place, property damage, or environmental damage.

Subpart D – Program 3 Prevention Program

40 C.F.R. § 68.65 Process Safety Information – I reviewed OCI's process safety information procedure (HSE.PSM.PRO.02); they compiled an overview of written process safety information, which includes information pertaining to the hazards of the regulated substances used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process. The process safety information contained Safety Data Sheets (anhydrous ammonia and methanol created by OCI and chlorine supplied from supplier), toxicity information, permissible exposure limits, physical data, reactivity data, corrosivity data, thermal and chemical stability data and the hazardous effects of inadvertent mixing of materials that could foreseeably occur. The facility documented information pertaining to the technology of the process including block flow diagrams, process chemistry, maximum intended inventory inside the process safety information procedure, safe upper and lower limits, and an evaluation of consequences of deviation. OCI also compiled safety information that contained materials of construction that is present on P&IDs based upon current recognized and generally accepted good engineering practices (RAGAGEP), piping and instrumentation

diagrams (P&IDs) were provided, electrical classification, relief system design and design basis, ventilation system design, design codes and standards employed (API, ASME, ANSI, ASHRAE), material and energy balances for processes and safety systems. Based on the design codes and standards provided, OCI uses this to document that the facility complies with recognized and RAGAGEP.

40 C.F.R. § 68.67 Process hazard analysis (PHA) – I reviewed OCI’s PHA procedure (HSE.PSM.PRO.03). OCI performed an initial PHA, and this analysis identified, evaluated, and controlled the hazards involved in the process. OCI has two RMP PHAs: one for ammonia (anhydrous) and one for methanol. Both PHAs were completed using the Hazard and Operability Study (HAZOP) and Checklist. The PHA addresses hazards of the process, identification of any incident that had a likely potential for catastrophic consequences, engineering and administrative controls applicable to hazards and interrelationships, consequences of failure of engineering and administrative controls, stationary source siting, human factors and an evaluation of a range of the possible safety and health effects of failure of controls. The PHA team consists of a 3rd party consulting agency along with OCI personnel. OCI uses an electronic database called “MESH” to promptly address the team’s findings and recommendations; assured that the recommendations are resolved in a timely manner and documented; completed actions as soon as possible; documented what actions are to be taken; developed a written schedule of when these actions are to be completed; and communicated the actions to operating, maintenance, and other employees whose work assignments are in the process and who may be affected by the recommendations. The ammonia (anhydrous) PHA was initially completed in 2011, then in 2012 by a 3rd party consultant, in 2013 following the debottlenecking event and most recently in December 2017. The methanol PHA was initially completed in 2011, 2012, and 2013 following the debottlenecking event, and most recently in 2016.

40 C.F.R. § 68.69 Operating Procedures – I reviewed OCI’s procedure for the implementation of operating procedures RMP element (HSE.PSM.PRO.04). Of the procedures reviewed, OCI developed and implemented written operating procedures that provide instructions or steps for conducting activities associated with each covered process consistent with the safety information. Operating procedures are accessible and maintained via SharePoint. I viewed selected operating procedures that addressed steps for each operating phase, operating limits, safety and health considerations and safety systems and their functions. OCI did not annually certify that the operating procedures are current and accurate. OCI could only provide the 2017 annual certification when requested for 2014-2018 **[AOC 5]**. This was a compliance audit finding in 2015 and 2018. I reviewed OCI’s procedure and forms that were developed to implement safe work practices to provide for the control of hazards during specific operations, such as lockout/tagout and confined space.

40 C.F.R. § 68.71 Training – I reviewed OCI’s training procedure (HSE.PSM.PRO.05). OCI’s training/procedures coordinator discussed how each employee involved in operating a process was initially trained in an overview of the process and in the operating procedures including emphasis on safety and health hazards and emergency operations. Refresher training of operators is a similar program with curriculum and content to ensure competency that consists of both exams and field demonstrations. Refresher training (Methanol CCR) had not been provided at least every three years to one of the four employees whose training records I reviewed. The training dates were October 13, 2014, and November 28, 2017. **[AOC 6]** The facility ascertains and documents that each employee involved in operating a process has received and understood the training by using both exams and on-the-job trainings. Each training record reviewed contained the needed elements and was stored in a file cabinet.

40 C.F.R. § 68.73 Mechanical Integrity – I reviewed OCI's Mechanical Integrity procedure (HSE.PSM.PRO.08) that was established and implemented to maintain the on-going integrity of the process equipment. Each employee or contractor employee involved in maintaining the on-going integrity of process equipment has the relevant American Petroleum Institute (API) certifications. The facility stated that all inspections and tests are completed in accordance to API/ American Society of Mechanical Engineers (ASME) RAGAGEP. OCI uses a Computerized Maintenance Management system (CMMS) to generate work orders for inspection and testing of equipment. Ninety days before an inspection becomes due, a work order (preventative maintenance) plan is generated in the system. Inspectors will use this plan to guide them through the inspecting/ testing procedures. OCI has detailed plans and schedules for conducting corrosion studies on process equipment. OCI intends to move toward risk-based inspections (RBI) once the facility determines appropriate intervals. OCI has not ensured the frequency of inspections and tests of process equipment is consistent with applicable manufacturers' recommendations, good engineering practices, and prior operating experiences. **[AOC 7]** There are visual inspections overdue for the ammonia and methanol due to the process area being too hot to inspect. These inspections will be delayed to the next turnaround. At the time of the inspection, OCI did not have a total number of overdue inspections. OCI provided a list of overdue inspections that were identified by a due date of 9/9/9999.

40 C.F.R. § 68.75 Management of Change (MOC) – OCI has established written procedures to manage changes to process chemicals, technology, equipment, procedures, personnel and changes to stationary sources that affect a covered process (HSE.PSM.PRO.10). I reviewed the procedure and several MOCs to assure the necessary considerations were addressed prior to any change including: the technical basis for the proposed change, impact of change on safety and health, modifications to operating procedures, necessary time period for change and the proper authorization requirements. OCI uses an internal system named "MESH" to initiate and manage process changes. Prior to 2017, the system did not provide a means to assure that OCI employees who were involved in operating a process and maintenance, and contract employees, whose job tasks would be affected by a change in the process, were informed of and trained in, the change prior to the start-up of the process or affected parts of the process. The affected employees were not trained or informed as needed. **[AOC 8]** OCI provided documentation that when a changed impacted process safety information including P&IDs, the information was updated accordingly, as well as an update to impacted operating procedures.

40 C.F.R. § 68.77 Pre-startup Safety Review – I reviewed OCI's procedure for pre-startup safety reviews (HSE.PSM.PRO.07). The procedure documented that when the facility installed a new stationary source, or significantly modified an existing source, that a review was conducted prior to the introduction of the newly regulated substance that included the appropriate elements that includes training.

40 C.F.R. § 68.79 Compliance Audits – OCI provided me with their two most recent Compliance Audits (December 16-18, 2014 and November 7-9, 2017). Each audit was conducted by a 3rd party company along with OCI staff. The audits detailed the findings documented in a report. OCI had audit findings in the November 2017 audit that were present in the December 2014 audit. This does not demonstrate that the facility promptly determined and documented an appropriate response to each of the findings of the audit and document that deficiencies had been corrected. **[AOC 9]**

40 C.F.R. § 68.81 Incident Investigation – OCI provided a procedure for incident investigations and reporting (HSE.PSM.PRO.11). Incident investigations are tracked and monitored in the MESH system. OCI's Level 2 incidents are considered to be RMP/ PSM reportable incident investigations. I viewed selected investigations to ensure that investigations were initiated not later than 48 hours following the

incident. Each level of incident has a team established of individuals knowledgeable in the process. Depending on the level or severity of the incident, OCI will conduct a Taproot investigation within MESH. OCI conducts meetings in which reports are reviewed with all affected personnel whose job tasks are relevant to the incident findings. OCI has retained all investigations back for at least five years (2013).

40 C.F.R. § 68.83 Employee Participation – I reviewed OCI’s written plan of action regarding the implementation of the employee participation required by this subpart (HSE.PSM.PRO.01).

40 C.F.R. § 68.85 Hot Work Permit – I reviewed OCI’s procedure for hot work permits (HSE.PSM.PRO.09). The facility issues hot work permits for hot work operations conducted on or near a covered process that are for the duration of the shift being issued. I reviewed two recently conducted hot work permits to assure that each permit indicated the date authorized for the hot work and that the permit documented that the fire prevention and protection requirements in 29 C.F.R. 1910.252 (a) were implemented.

40 C.F.R. § 68.87 Contractors – I reviewed OCI’s procedure for contractor safety (HSE.PSM.PRO.06). OCI has used a 3rd party contractor selection process since 2011 to obtain and evaluate each contractor. Once selected, OCI contractors begin at the Industrial Safety Training Council (ISTC). They receive both basic training and site-specific training relevant to the facility. The 3rd party administrator annually evaluates the performance of the contractors.

Subpart E – Emergency Response

40 C.F.R. § 68.90 Applicability – The OCI facility is designated as a “first responder” in case of an accidental release of regulated substances.

40 C.F.R. § 68.95 Emergency Response Program – OCI coordinates emergency response efforts with neighboring facility’s supervised by Lucite. The three facilities involved have approximately 77 individuals on the shared response team. OCI provides approximately 34 of the 77 individuals. Lucite manages the roster of OCI trainings for response obligations. The site has regular trainings across the site with each team to model real life situations, so they may train with the same individuals they would in a real event. In addition, the Beaumont Fire department is the 1st offsite call to notify of any emergency event. OCI is a member of the Sabine Neches Chiefs Association for mutual aid as well as the Jefferson county Local Emergency Planning Committee.

Subpart G – Risk Management Plan

40 C.F.R. § 68.190 Updates – OCI’s RMP was re-submitted (voluntary update) on October 14, 2014.

40 C.F.R. § 68.195 Required corrections – OCI’s next RMP re-submission is due by October 14, 2019, unless an update or correction is required by 40 C.F.R. 68.190 and 40 C.F.R. 68.195.

Closing Meeting – A closing meeting was held to discuss Areas of Concern, recommendations, and the process of completing the inspection report.

Table 2: Closing Meeting Attendance, Thursday October 18, 2018

NAME	POSITION
Justin McDowell	USEPA R6 Inspector
Brian Lucas	HSEQ Manager
Cliff Wenzel	Sr. Environmental Engineer
Joseph Hagmann	Plant Manager
Thomas Harden	Maintenance Manager
Beckey Blanchet	Staff
Byron Chase	Staff
Dan Murphy	Staff
Rachel Milroy	HR Manager
Leo Acosta	Staff

Section III – AREAS OF CONCERN

AOC 1 – 40 C.F.R § 68.28 (a) Alternate release scenario analysis

” §68.28 (a) The number of scenarios. The owner or operator shall identify and analyze at least one alternative release scenario for each regulated toxic substance held in a covered process(es) and at least one alternative release scenario to represent all flammable substances held in covered processes.”

OCI provided a 2010 alternate release scenario and could not produce any updated scenarios.

AOC 2 – 40 C.F.R § 68.30 (a) Hazard Assessment: Defining off-site impacts – Population

“(a) The owner or operator shall estimate in the RMP the population within a circle with its center at the point of the release and a radius determined by the distance to the endpoint defined in § 68.22(a).”

OCI’s estimation of population that would be included in the distance to endpoint in the RMP based on a circle with the point of release at the center did not exist for the alternative release scenario analysis.

AOC 3 – 40 C.F.R § 68.33 (a) Hazard Assessment: Defining off-site impacts – Environmental

“(a) The owner or operator shall list in the RMP environmental receptors within a circle with its center at the point of the release and a radius determined by the distance to the endpoint defined in § 68.22(a) of this part.”

OCI’s environmental receptors that would be included in the distance to endpoint based on a circle with the point of release at the center did not exist for the alternative release scenario analysis. OCI created this documentation and provided it to EPA on October 18, 2018.

AOC 4 – 40 C.F.R § 68.36 (a) Hazard Assessment: Review and update

“(a) The owner or operator shall review and update the offsite consequence analyses at least once every five years.”

OCI stated that this documentation is reviewed and updated at least once every five years, but the most recent alternative release scenario analysis was 2010.

AOC 5 – 40 C.F.R § 68.69 (c) Operating Procedures

“(c) The operating procedures shall be reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and changes to stationary sources. The owner or operator shall certify annually that these operating procedures are current and accurate.”

OCI did not annually certify annually that the operating procedures are current and accurate. OCI could only provide the 2017 annual certification when asked for the previous three years’ certifications (2014-2018).

AOC 6 – 40 C.F.R § 68.71 (b) Training

“(b) *Refresher training.* Refresher training shall be provided at least every three years, and more often if necessary, to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process. The owner or operator, in consultation with the employees involved in operating the process, shall determine the appropriate frequency of refresher training.”

Refresher training (Methanol CCR) had not been provided at least every three years to one of the four employees whose training records I reviewed. The training dates were October 13, 2014 and November 28, 2017.

AOC 7 – 40 C.F.R § 68.73 (d)(3) Mechanical Integrity

“(d) *Inspection and testing.* (3) The frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers’ recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience.”

OCI has not ensured the frequency of inspections and tests of process equipment is consistent with applicable manufacturers’ recommendations, good engineering practices, and prior operating experiences. There are visual inspections overdue for the ammonia and methanol due to the process area being too hot to inspect. These inspections will be delayed to the next turnaround. At the time of the inspection, OCI did not have a total number of overdue inspections. OCI provided a list of overdue inspections that were identified by a due date of 9/9/9999.

AOC 8 – 40 C.F.R § 68.75 (c) Management of change

“(c) Employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process shall be informed of, and trained in, the change prior to start-up of the process or affected part of the process.”

OCI uses an internal system named “MESH” to initiate and manage process changes. Prior to 2017, the system did not provide a means to assure that OCI employees who were involved in operating a process and maintenance, and contract employees, whose job tasks would be affected by a change in the process, were informed of and trained in, the change prior to the start-up of the process or affected parts of the process. After clarification from the facility, OCI had a system in place prior to 2017 but was not effectively utilized for informing affected employees/ contactors of the change or impact of the change. This was consistent with a 2017 compliance audit finding.

AOC 9 – 40 C.F.R § 68.79 (d) Compliance audits

“(d) The owner or operator shall promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that deficiencies have been corrected.”

OCI had audit findings in the November 2017 audit that were present in the December 2014 audit. This does not demonstrate that the facility promptly determined and documented an appropriate response to each of the findings of the audit and document that deficiencies had been corrected.

Section IV – FOLLOW UP

On October 25, 2018, OCI sent documentation requested during the Closing meeting. Subsequent documentation was received on November 1, 2018.

Section V – LIST OF APPENDICES

N/A